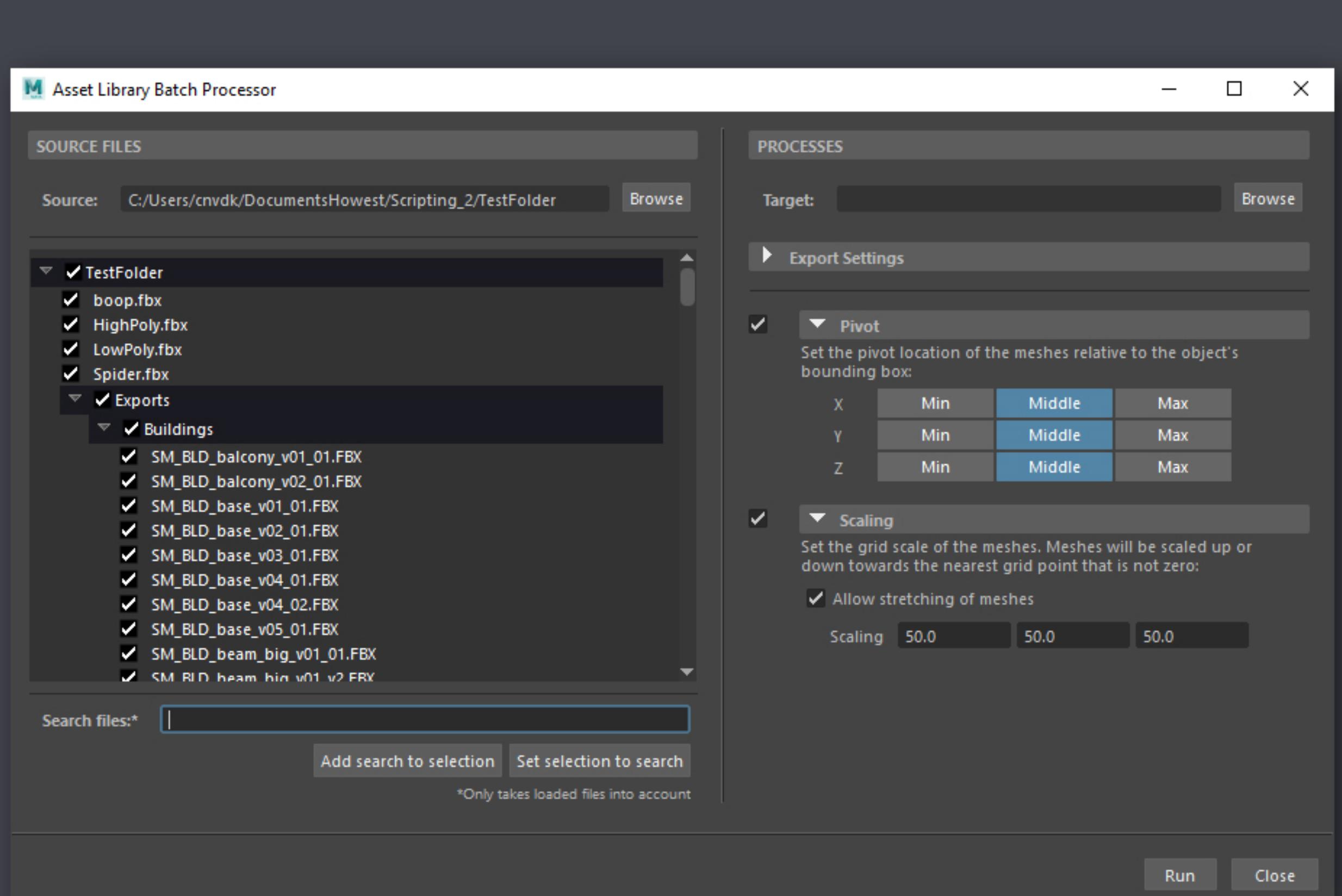


Asset Library Batch Processor

Scripting II - Small Assignment



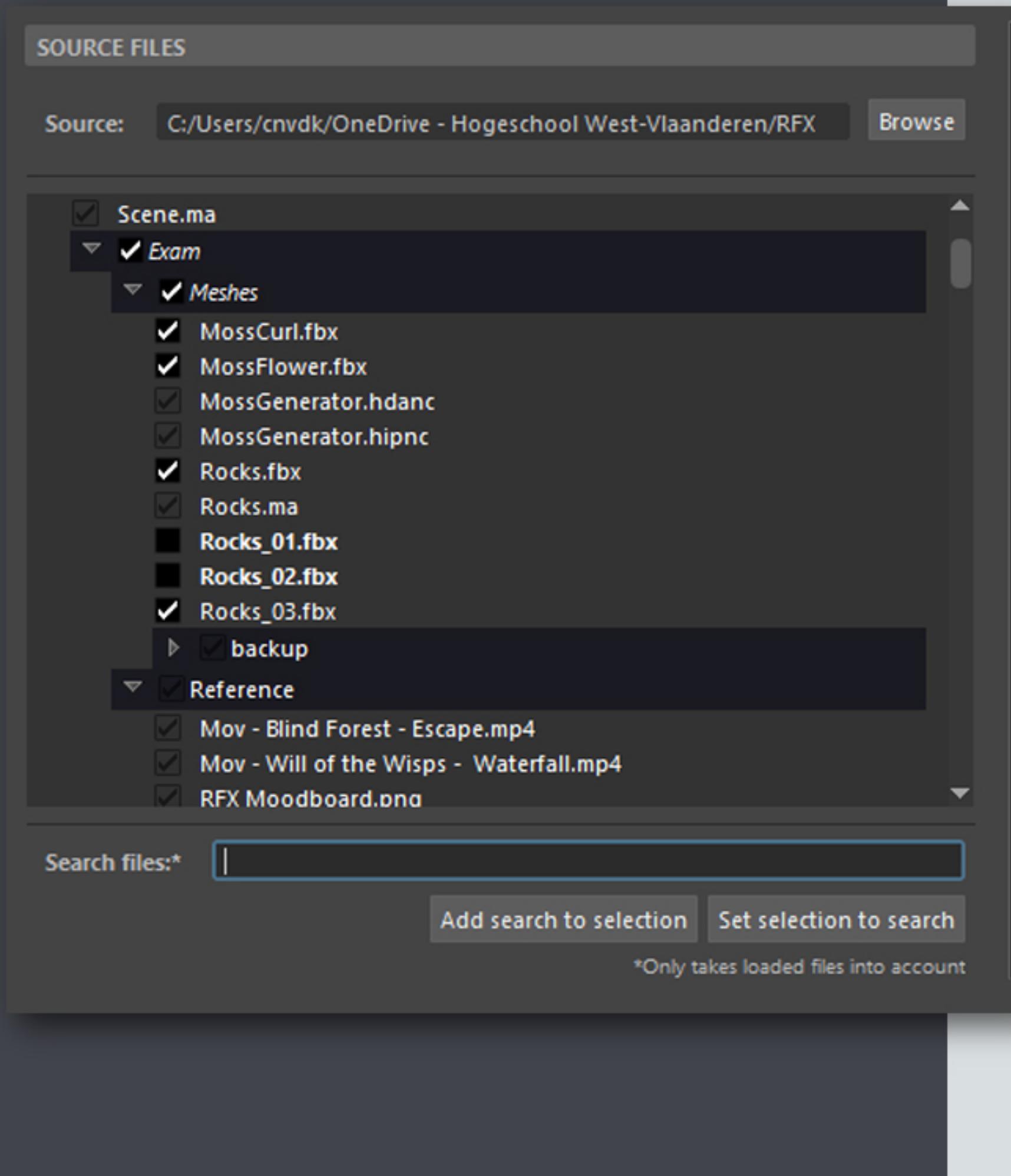
This Asset Library Batch Processor is meant for simple processing of small to medium-sized asset libraries with the option of setting the pivot and scaling to a grid uniformly over all assets.

UI Overview

The lay-out is split down the middle. The left side of the UI is concerned with the source files and their selection, whereas the right side includes the processing and exporting options.

Preferences of all settings, except the file selections and search, get saved in the user's Maya preference folder.

Source Selection

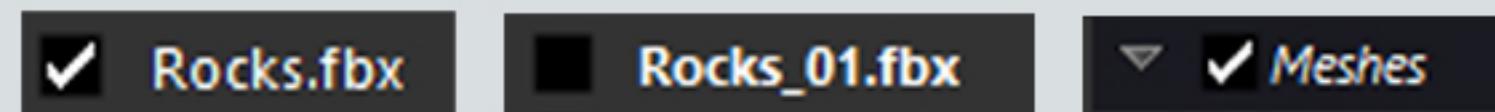


The source files section on the left side consists of multiple components.

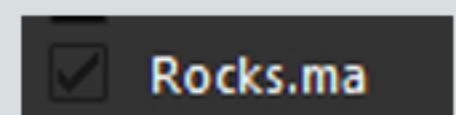
At the top, the user can select their **preferred source folder**. This will load in the entire file system, including subdirectories. An error will be displayed if no fbx files were found in the system and the user will be prompted to pick another directory. By default, this folder points to the current Maya project folder. Upon closing, the preferences get updated.

The chosen directory and its files will be displayed underneath, where the user can **select or deselect** files and directories as they see fit.

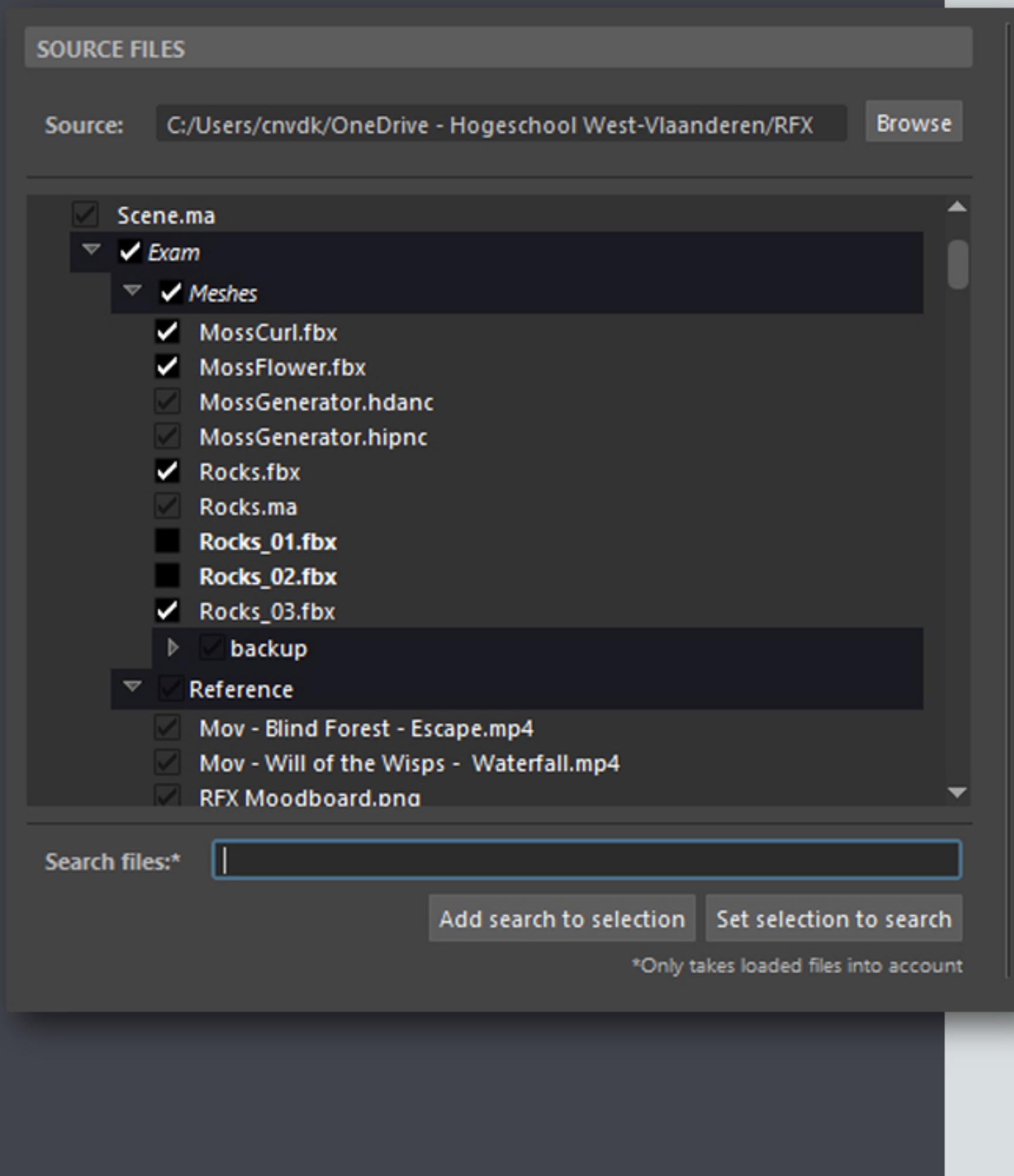
Files that were deselected will also be bolded. If a directory includes a combination of included and excluded files, this will be displayed by italic naming.



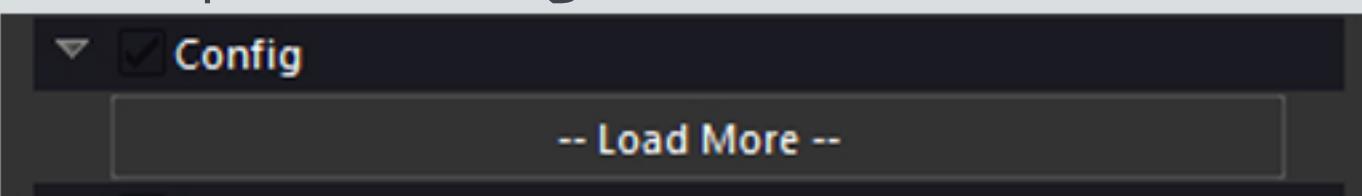
Depending on the export settings, which will be explained under settings, non-fbx files will be disabled for selection. These files will never be processed.



Source Selection



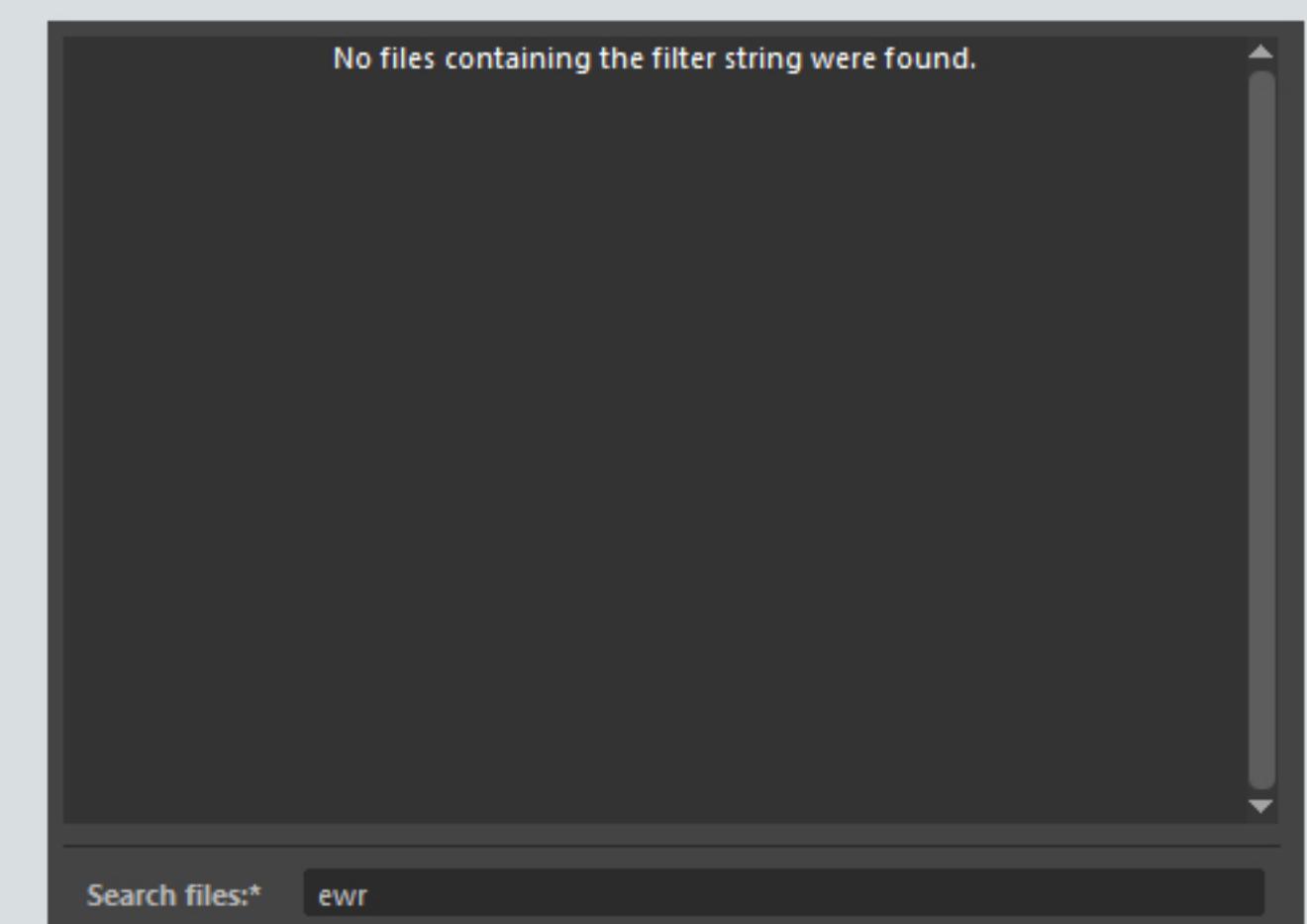
As displaying large file systems can be incredibly slow, the batch processor tries to remedy this to a degree by only **loading** up to four subdirectories deep. After this level, a button will be displayed to be able to load in more. Pressing this button will load in **more** files, four additional levels at a time, within the subdirectory. If an **unloaded** directory is included, it will process **all** files in this directory, adhering to the export settings.



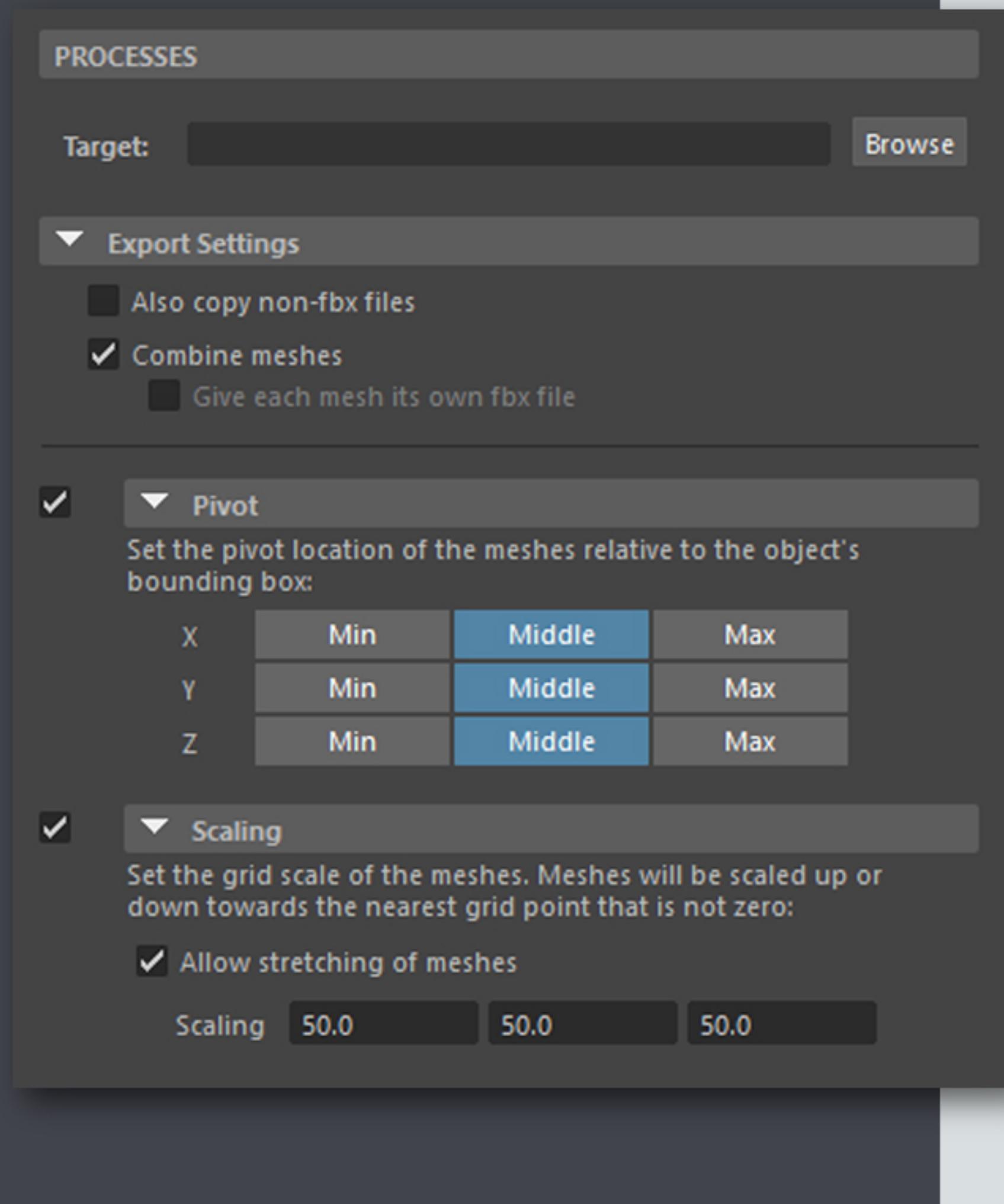
Finally, a **search option** is available below the file system. By pressing enter or focussing another part of the window, any files not containing the filter phrase will be hidden. The user can also instantly set this search as their selection or add the files to their selection.

Only loaded files will be searched and included.

The user can clear the filter again to show all. This search has no direct impact on which files get processed. If no files were found, a message will be displayed indicating this.

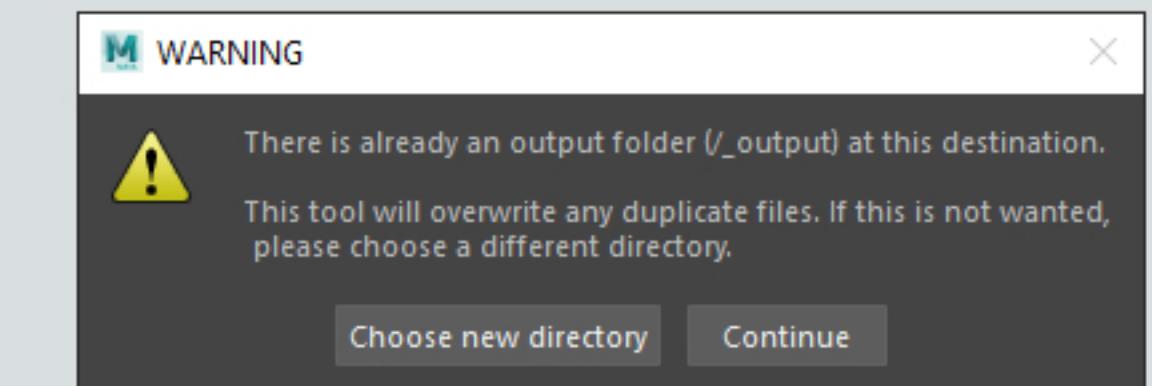


Settings & Options



The second half of the UI pertains to the settings and processing options of the batch processor. All of these settings are saved upon closing the processor.

At the top, the **target directory** can be chosen. This target directory must have write access, which will be checked. A folder called “*_output*” will be created by the processor in this location. If this folder already exists, a warning will be displayed as duplicate files in this folder will be overwritten. The user then has the option to still change the folder or keep it. If any files get overwritten in the process, a warning will be logged. The source folder’s folder structure will be preserved.



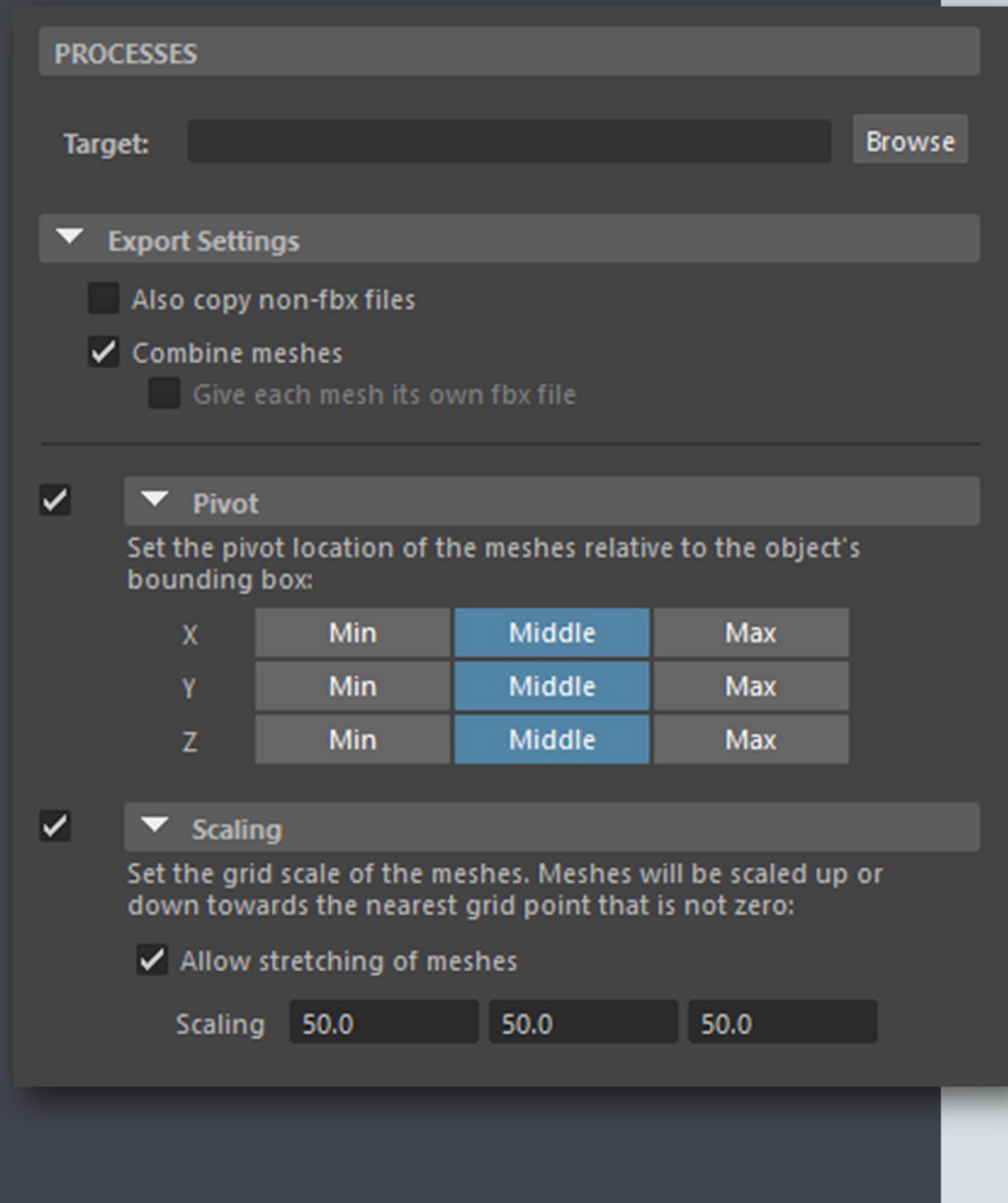
Upon closing, the preferred folder gets saved. If the user does not change their target before running the processor, the same checks will be ran.

Below the target directory, **export settings** can be set. There are three settings:

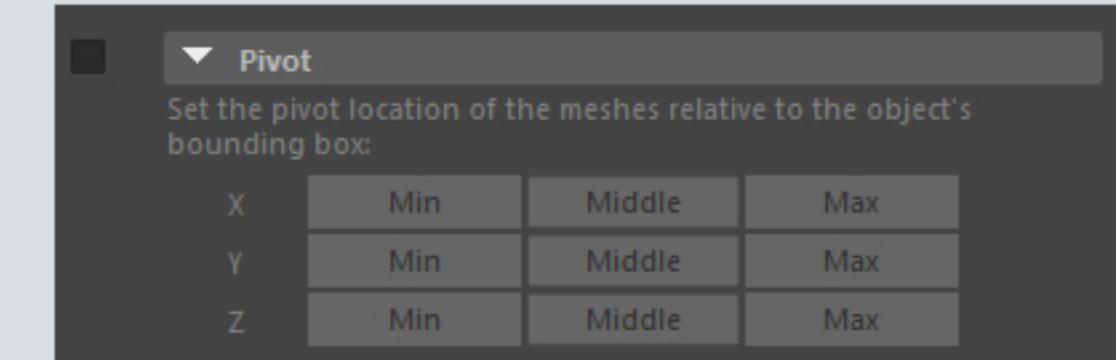
- **Also copy non-fbx files**: Will copy along any non-fbx files without attempting the processing options.
- **Combine meshes**: Will combine any objects within one fbx and treat it as one.
- **Give each mesh its own fbx file**: Only available if *Combine meshes* is turned off. This will process each mesh object in a file separately and export them separately. The name of the files then becomes *OriginalFbx_ObjectName.fbx*.

By default, only *Combine meshes* is turned on.

Settings & Options



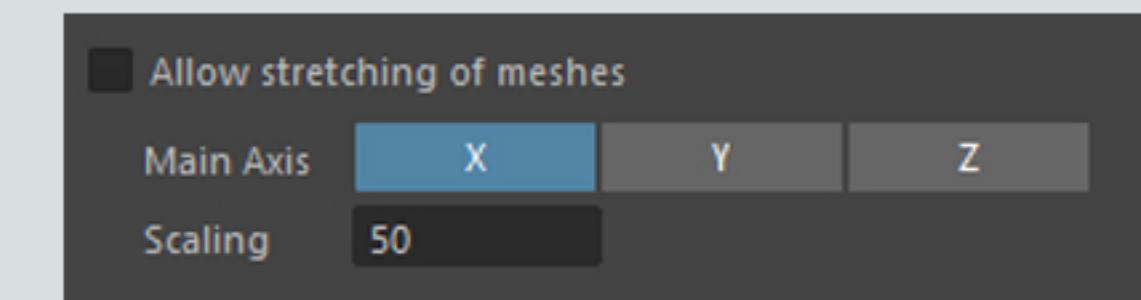
The **processing options** include the changing of the pivot and scaling. Either or both of these processes can be turned off or on by clicking the checkbox next to the corresponding process. The options will also be disabled if the process is turned off. If both processes are turned off, the processor will still copy all selected files over.



Including the **pivot process**, will set the pivot location of the objects relative to the object's axis-aligned bounding box. This can be set to the min, max or middle of each axis. The default for each axis is *middle*.

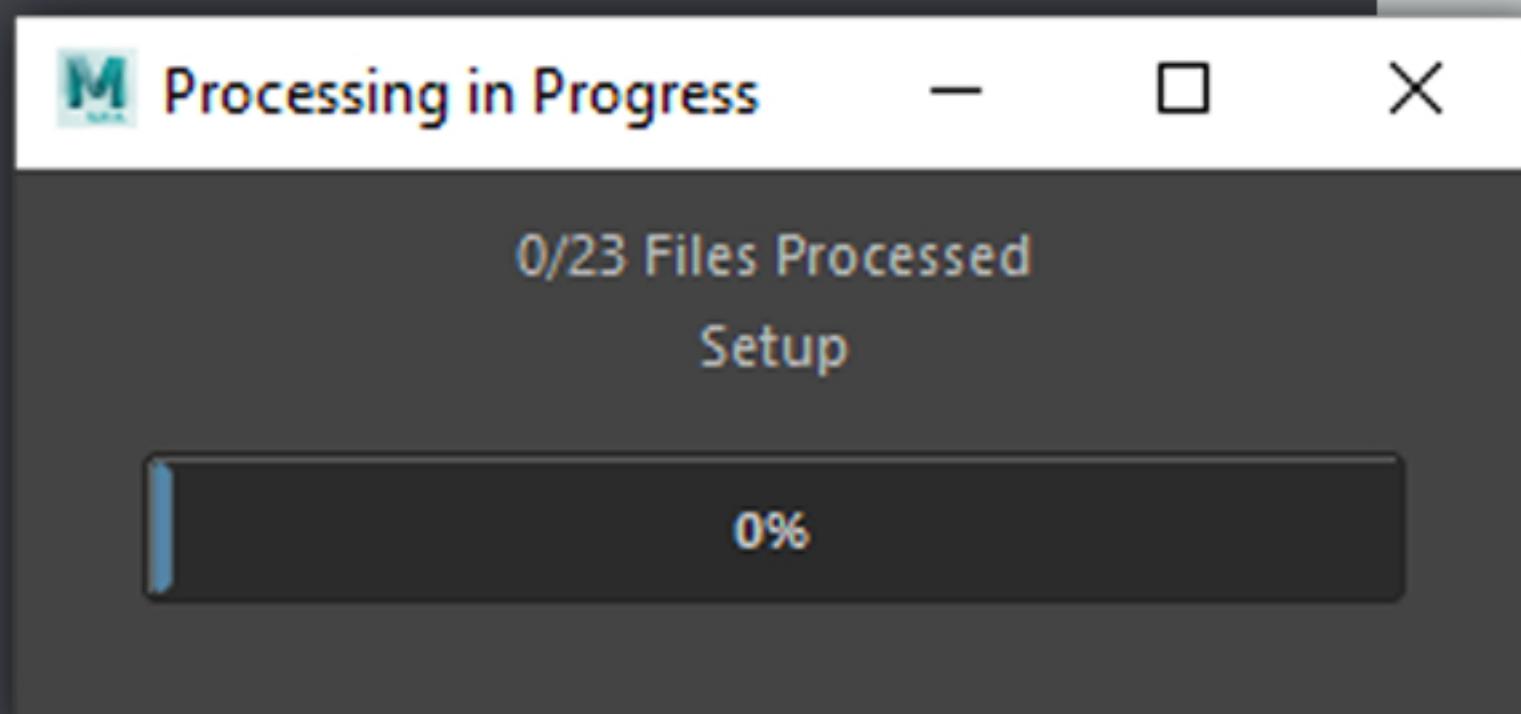
The **scaling process** allows the user to define a grid. All dimensions of the objects will be snapped to this grid if stretching is allowed. If not allowing stretching, the user will be asked to pick a main axis to snap to the grid. The other axes will then be scaled uniformly.

The minimum value a user is able to give in in any of the fields is 0.01. Any value below this will be snapped back up. By default the values are set to 50.



If an object's original dimensions deviate too far from the grid or got stretched significantly, a warning will be logged. All **logged warnings** can be found in a file *log.txt* in the output's root folder.

Processing



When the user press the Run button at the the bottom of the UI, the processor will start the selected processes. The **progress** of this will be indicated with the help of a new window.

A progress bar as well as text will display to the user how far along the program has come. It will also display the current job, the process is running be it *Setup*, *Adjusting Dimensions*, *Adjusting Pivot* or *Exporting*. The processing is always run in this order.

Once the processing has been concluded, this will also be indicated by an updated window. It will also display the amount of warnings logged by the system.

